



June 30, 2014

Ms. Jemellee Cruz, P.E.
Los Angeles County Flood Control District
Flood Maintenance Division
900 South Fremont Avenue, Annex Building, 2nd Floor
Alhambra, California 91803

VIA EMAIL
jcruz@dpw.lacounty.gov

Subject: Results of Biological Inventory Surveys of Reach 101, Violin Canyon (PD 1707 & 2312), near Castaic, Los Angeles County, California

Dear Ms. Cruz:

This Letter Report presents the findings of plant and wildlife inventory and vegetation mapping surveys conducted at Reach 101, Violin Canyon (PD 1707 & 2312), in the Community of Castaic in unincorporated Los Angeles County (Exhibit 1). Reach 101 is 1,817 feet in length with an area of 4.39 acres and is located in the Castaic Creek Watershed (Exhibit 2). This soft-bottom channel (SBC) reach is in the process of being added to the Los Angeles County Flood Control District's (LACFCD's) existing California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers (USACE), and Regional Water Quality Control Board (RWQCB) channel maintenance permits. The purpose of these surveys is to provide biological information in support of LACFCD's request for inclusion of SBC Reach 101 with their existing regulatory permits.

METHODS

BonTerra Psomas Biologists Jason Mintzer, Allison Rudalevige and Sarah Thomas, and Leatherman BioConsulting Senior Botanist Sandra Leatherman conducted the plant and wildlife inventory and vegetation mapping surveys on April 25, May 6, and May 27, 2014. Previous survey reports of this SBC reach were reviewed, including the results of biological inventory surveys conducted at this SBC reach in 2007 (BonTerra Consulting 2007).

All plant and wildlife species observed were recorded in field notes. Plant species were identified in the field or collected for subsequent identification using keys in Baldwin et al. (2012). Taxonomy follows Baldwin et al. (2012) and current scientific data (e.g., scientific journals) for scientific and common names. Nomenclature for vegetation types generally follows that of the List of Vegetation Alliances and Associations, Vegetation Classification and Mapping Program (CDFG 2010). The vegetation types identified during the surveys reflected the vegetation shown on the aerial maps and not necessarily the actual vegetation on the channel bottom (invert).

225 South Lake Avenue
Suite 1000
Pasadena, CA 91101

Tel 626.351.2000
Fax 626.351.2030
www.BonTerraPsomas.com

Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic signs including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows Stebbins (2012) for amphibians and reptiles, American Ornithologists' Union (2013) for birds, and Baker et al. (2003) for mammals.

RESULTS

The following discussion is primarily limited to those plant and wildlife species observed during the surveys. For a complete list of plant and wildlife species observed during the surveys, see Attachment A.

Vegetation/Plants

The SBC Reach 101 supports four vegetation types (alluvial sage scrub, disturbed alluvial sage scrub, mule fat scrub, and mule fat scrub-tamarisk scrub) and two other areas (open wash, and developed) as illustrated on Exhibits 3a and 3b and summarized in Table 1 below. Major vegetation types represented on site, or those with potential to be of high habitat value, are discussed below. Individual plant species are discussed below in conjunction with associated vegetation types. For a complete list of plant species see Attachment A. Representative site photographs are included as Exhibits 4a and 4b.

TABLE 1
VEGETATION TYPES AND OTHER AREAS

Vegetation Type	Acres
Alluvial Sage Scrub	3.98
Disturbed Alluvial Sage Scrub	0.53
Mule Fat Scrub	0.07
Mule Fat Scrub-Tamarisk Scrub	0.24
Open Wash	0.57
Developed	0.01
TOTAL ACRES	5.41*
* This total exceeds the total amount described for Reach 101 (4.39 acres) as it includes a buffer area	

Alluvial sage scrub is the dominant vegetation type at SBC Reach 101, and scale-broom (*Lepidospartum squamatum*) is the dominate species of this vegetation type. Other shrubs that occur scattered throughout the alluvial sage scrub include California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), California buckwheat (*Eriogonum fasciculatum*), California brittlebush (*Encelia californica*), coastal deerweed (*Acmispon glaber* var. *brevialatus* [*Lotus scoparius* var. *scoparius*]), coyote brush (*Baccharis pilularis* ssp. *consanguinea*), mule fat (*Baccharis salicifolia* ssp. *salicifolia*), and blue elderberry (*Sambucus nigra* ssp. *caerulea*). Common herbaceous species such as annual bur-sage (*Ambrosia acanthicarpa*), tocalote (*Centaurea melitensis*), common eucrypta (*Eucrypta chrysanthemifolia*), strigose lotus (*Acmispon strigosus* [*Lotus* s.]), and black mustard (*Brassica nigra*) were present during the survey. Note that alluvial sage scrub and disturbed alluvial sage scrub vegetation types are comprised of the same

plant species, however, in the disturbed portion there is evidence of physical disturbance to the vegetation (i.e. cleared at this location for apparent fire abatement).

The mule fat scrub vegetation type was identified in those areas with almost pure stands of mule fat. In some areas of SBC Reach 101, mule fat and the non-native tamarisk (*Tamarix ramosissima*) are mixed together as co-dominants and these stands are identified as the mule fat – tamarisk scrub vegetation type.

Open or unvegetated wash are areas that consist of bare sand, silt, or cobble that generally contain no vegetation. These areas have been scoured or otherwise kept clear of vegetation (i.e., clearing activities). Vegetation may colonize these areas in the absence of scouring or clearing activities.

Wildlife

Wildlife use of SBC Reach 101 is expected to be limited due to its relatively small size and general isolation from other open space areas. Upstream of SBC Reach 101, the channel passes underneath the Golden State Freeway (I-5). Except for during storm events, standing water is typically not present in this reach. Alluvial sage scrub vegetation is the dominant vegetation type of this reach and can provide high quality wildlife habitat for specialized species. At this site, however, the habitat quality is diminished by its relatively small size, its general isolation from other open space areas, and human disturbance. For a complete list of wildlife species see Attachment A.

No amphibian species were observed during the surveys and none are expected to occur at SBC Reach 101¹. Two common reptiles, western fence lizard (*Sceloporus occidentalis*) and side-blotched lizard (*Uta stansburiana*) were observed during the surveys. Although not observed, the southern alligator lizard (*Elgaria multicarinata*) is expected to occur. No snakes were observed during the surveys, but the coachwip (*Masticophis flagellum*), common kingsnake (*Lampropeltis getula*), and gopher snake (*Pituophis catenifer*) are expected to occur at this site. Birds observed during the surveys included bushtit (*Psaltirparus minimus*), Bewick's wren (*Thryomanes bewickii*), California towhee (*Melozone [Pipilo] crissalis*), western tanager (*Piranga ludoviciana*), house finch (*Haemorhous [Carpodacus] mexicanus*), and lesser goldfinch (*Spinus [Carduelis] psaltria*). All of these species are expected to breed at this site, except for the western tanager. Western tanagers breed in mountain forests of the region, but is a common migrant throughout the region. The Audubon's cottontail (*Sylvilagus audubonii*) was the only mammal species detected during the surveys. Other mammals expected to occur at this site include Virginia opossum (*Didelphis virginiana*), coyote (*Canis latrans*), northern raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

¹ Note that the 2005 and 2007 focused surveys for arroyo toad (*Anaxyrus californicus*) found Pacific chorus frog (*Pseudacris regilla*) and western toad (*Anaxyrus [Bufo] boreas*) in the survey area for SBC Reach 101 (BonTerra Consulting 2005; BonTerra Consulting 2007). These occurrences, however, were within the survey "buffer" area about 500 feet upstream of SBC Reach 101 in mixed willow riparian forest habitat where nuisance water from dry weather runoff exists at the channel outlet from under the I-5 Freeway.

CONCLUSIONS AND RECOMMENDATIONS

Though generally considered to be of high value due its relative scarcity in the region, the 3.98 acres of alluvial sage scrub and 0.53 acre of disturbed alluvial sage scrub in SBC Reach 101 are considered to be of less value due to the overall small amount of habitat present, its general isolation from other open space areas, and the level of human disturbance present at this site.

Focused surveys for the San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) and slender-horned spineflower (*Dodecahema leptoceras*) were conducted at SBC Reach 101 in 2003 with negative results (BonTerra Consulting 2003). Focused surveys for special status plants, including the San Fernando Valley spineflower and slender-horned spineflower, were again conducted in 2014 at this reach for the Santa Clara River Watershed Feasibility Study and the results were negative. Details on this focused survey will be provided in a subsequent report.

Focused surveys for the arroyo toad (*Anaxyrus californicus*) were not recommended for SBC Reach 101 in 2003 based on existing habitat conditions. Focused surveys, however, were conducted in 2005 and 2007 with negative results (BonTerra Consulting 2005, BonTerra Consulting 2007). The 2005 and 2007 surveys were conducted because the proposed Designated Critical Habitat for arroyo toad (USFWS 2001) came within 350 feet of the downstream limits of this SBC Reach 101. The Final Designated Critical Habitat for the arroyo toad does not include or come close to this site. Focused surveys for the arroyo toad were not recommended after the 2007 survey results.

Because Reach 101 does not provide potentially suitable habitat for the least Bell's vireo, BonTerra Psomas recommends the following permit language be adopted for this "non-sensitive" reach: construction activities in waters of the US shall be limited to the period outside of the nesting season (March 15-August 31) of any year.

Once the finalized scopes of work for maintenance activities at this SBC reach are developed by the LACFCD, BonTerra Psomas can calculate the acres of impact per vegetation type. A tree inventory survey for this SBC reach is expected to be conducted in Summer 2014.

BonTerra Psomas has appreciated the opportunity to assist on this project. If you have any comments or questions, please call Marc Blain or Brian Daniels at (626) 351-2000.

Sincerely,

BonTerra Psomas



Joan Patronite Kelly, AICP
Corporate Director of Environmental
Planning and Resource Management

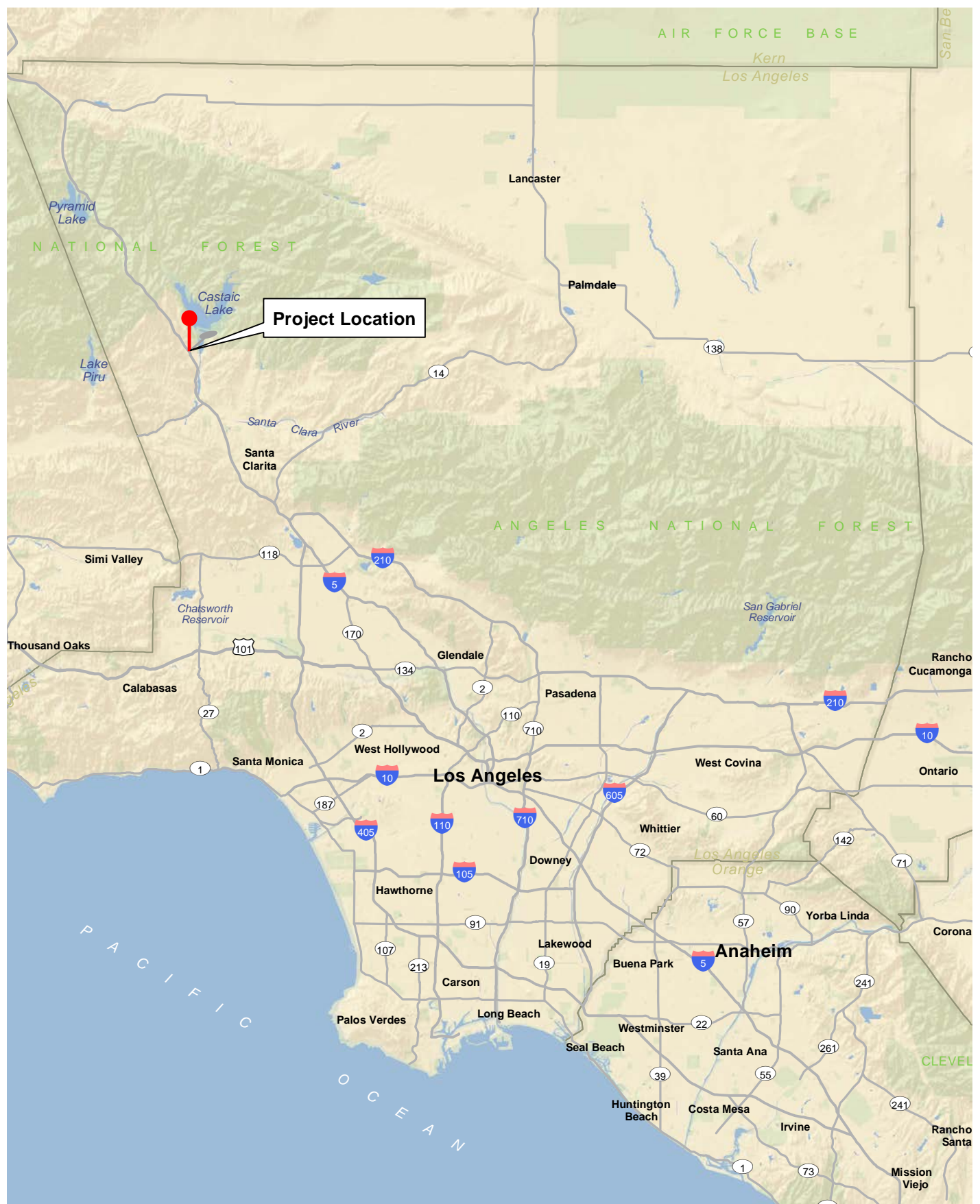


Marc T. Blain
Senior Project Manager

Enclosures: Exhibit 1 – Regional Location
Exhibit 2 – Local Vicinity
Exhibit 3a-b – Vegetation Types and Other Areas Map
Exhibit 4a-b – Site Photographs
Attachment A – Plant and Wildlife Compendia

REFERENCES

- American Ornithologists' Union (AOU). 2013 (September). *Check-list of North American Birds* (7th ed., as revised through 54th Supplement). Washington, D.C.: AOU.
<http://www.aou.org/checklist/north/index.php>.
- Baker, R.J., L.C. Bradley, R.D. Bradley, J.W. Dragoo, M.D. Engstrom, R.S. Hoffmann, C.A. Jones, F. Reid, D.W. Rice, and C. Jones. 2003 (December). Revised Checklist of North American Mammals North of Mexico, 2003. Occasional Papers (No. 229). Waco, TX: Museum of Texas Tech University.
- Baldwin, B.G., et al. (eds.), 2012. The Jepson Manual: Vascular Plants of California (Second ed.). Berkeley, CA: University of California Press.
- BonTerra Consulting. 2007. Results of Biological Inventory Surveys at Soft-Bottom Reaches 29, 33, 101, 102, 104, 105, 106, and 107, Los Angeles County, California. Pasadena, CA: BonTerra Consulting.
- . 2007. Los Angeles County Soft Bottom Channels 2007 Focused Survey Results. Pasadena, CA: BonTerra Consulting.
- . 2005. Los Angeles County Soft Bottom Channels 2005 Focused Survey Results. Pasadena, CA: BonTerra Consulting.
- . 2003. Los Angeles County Soft Bottom Channels 2003 Focused Survey Results. Pasadena, CA: BonTerra Consulting.
- California Department of Fish and Game (CDFG). 2010 (September). List of Vegetation Alliances and Associations, Vegetation Classification and Mapping Program.
- Stebbins, R.C. 2012. *A Field Guide to Western Reptiles and Amphibians* (Revisedrd ed.). Berkeley, Los Angeles, London, University of California Press.



Regional Location

Violin Canyon (PD 1707 & 2312) - Reach 101

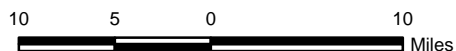
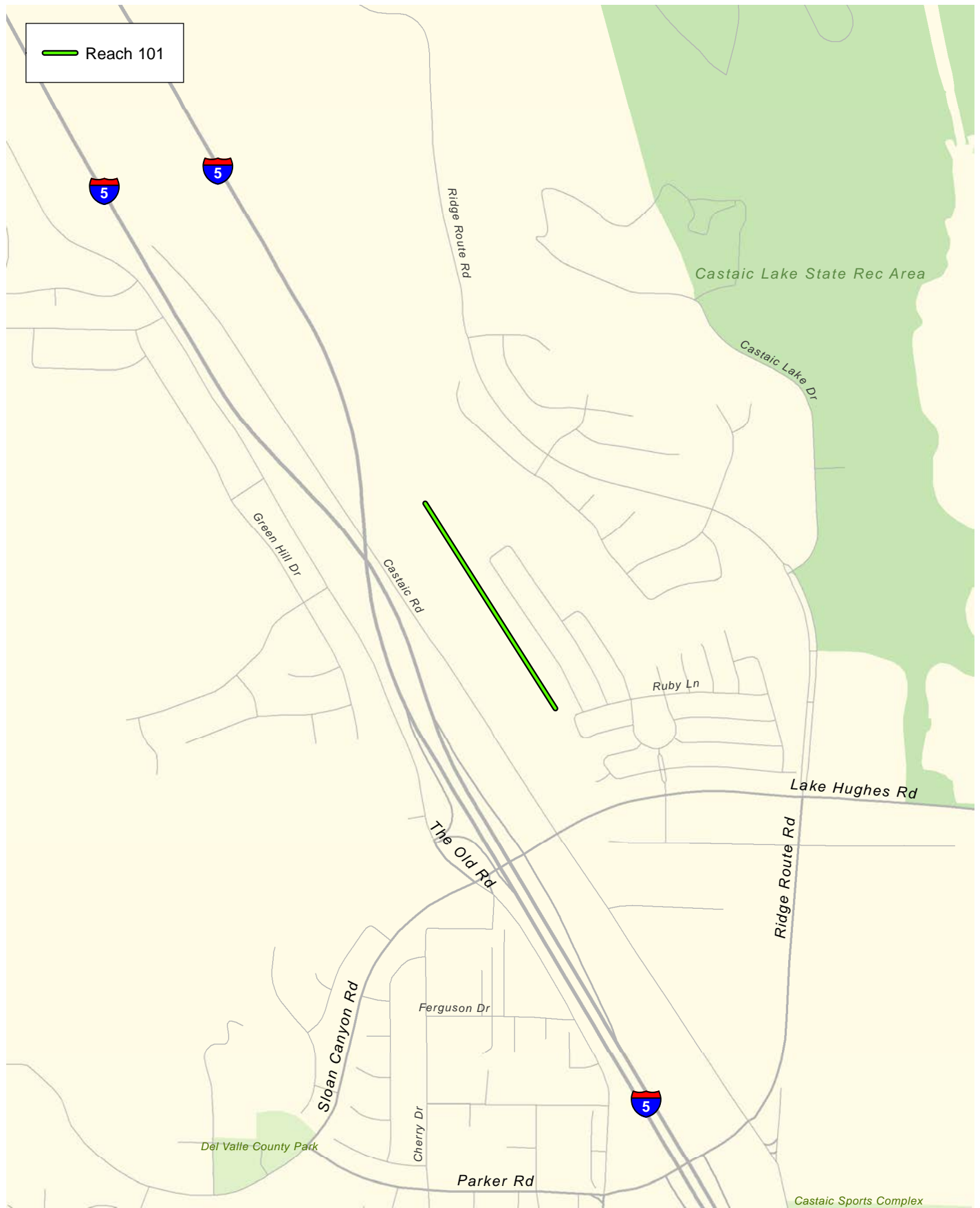


Exhibit 1

Bonterra
PSOMAS

(Rev: 5-22-2014 JAZ) H:\Projects\CoLADPW\J253\Graphics\Reach101\ex1_RL.pdf

Reach 101



Local Vicinity map

Violin Canyon (PD 1707 & 2312) - Reach 101



1,000 500 0 1,000 Feet

Exhibit 2

Bonterra
PSOMAS

(Rev: 5-22-2014 JAZ) H:\Projects\CoLADPWJ253\Graphics\Reach101\ex2_LV.pdf



Vegetation Types and Other Areas

Violin Canyon (PD 1707 & 2312) - Reach 101

Exhibit 3a

Bonterra
PSOMAS

(Rev: 6-30-2014 JAZ) H:\Projects\CoLADPW\J253\Graphics\Reach101\ex3_veg.pdf

D:\Projects\COLADPW\J253\mxd\Reach101\veg_v1.mxd



Vegetation Types and Other Areas

- Alluvial Sage Scrub
- Mule Fat Scrub-Tamarisk Scrub
- Open Wash

Vegetation Types and Other Areas

Violin Canyon (PD 1707 & 2312) - Reach 101

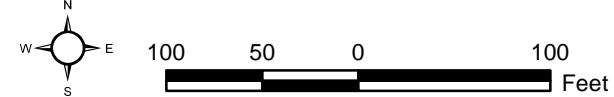


Exhibit 3b

Bonterra
PSOMAS

(Rev: 6-30-2014 JAZ) H:\Projects\COLADPW\J253\Graphics\Reach101\ex3_veg.pdf



May 6, 2014. View of facing northward.



May 6, 2014. View of mule fat-tamarisk habitat in background, disturbed alluvial sage scrub in foreground. Facing westward.

Site Photographs

Violin Canyon (PD 1707 & 2312) - Reach 101

Exhibit 4a

Bonterra
PSOMAS



May 6, 2014. View of downstream limit of disturbed alluvial sage scrub, facing southward.



May 6, 2014. Along left bank at north end of site, facing southward.

Site Photographs

Violin Canyon (PD 1707 & 2312) - Reach 101

Exhibit 4b

Bonterra
PSOMAS

(05/23/2014 JAZ) H:\Projects\CoLADPWJ253\Graphics\Reach101\ex4b_SP.pdf

ATTACHMENT A
PLANT AND WILDLIFE COMPENDIUM

REACH 101 PLANT COMPENDIA

Species	
EUDICOTS	
ADOXACEAE – MUSKROOT FAMILY	
<i>Sambucus nigra</i> ssp. <i>caerulea</i> [<i>S. mexicana</i>]	blue elderberry
APOCYNACEAE – DOGBANE FAMILY	
<i>Nerium oleander</i> *	common oleander
ASTERACEAE – SUNFLOWER FAMILY	
<i>Ambrosia acanthicarpa</i>	annual bur-sage
<i>Artemisia californica</i>	California sagebrush
<i>Baccharis pilularis</i> ssp. <i>consanguinea</i> [<i>B. pilularis</i>]	coyote brush
<i>Baccharis salicifolia</i> ssp. <i>salicifolia</i> [<i>B. salicifolia</i>]	mule fat
<i>Centaurea melitensis</i> *	totalote, Malta star-thistle
<i>Encelia californica</i>	California brittlebush
<i>Gazania linearis</i> *	gazania
<i>Lepidospartum squamatum</i>	scale-broom
<i>Logfia filaginoides</i> [<i>Filago californica</i>]	California cottonrose
BORAGINACEAE – BORAGE FAMILY	
<i>Cryptantha</i> sp.	cryptantha
<i>Emmenanthe penduliflora</i>	whispering bells
<i>Eriodictyon crassifolium</i>	thick-leaf yerba santa
<i>Eucrypta chrysanthemifolia</i>	common eucrypta
<i>Phacelia</i> sp.	phacelia
<i>Phacelia cicutaria</i>	caterpillar phacelia
<i>Phacelia viscida</i>	viscid phacelia
BRASSICACEAE – MUSTARD FAMILY	
<i>Brassica nigra</i> *	black mustard
<i>Hirschfeldia incana</i> *	shortpod mustard
<i>Lepidium latifolium</i> *	broad-leaved peppergrass
CHENOPODIACEAE – GOOSEFOOT FAMILY	
<i>Atriplex canescens</i>	four-wing saltbush
<i>Salsola tragus</i> *	Russian thistle
<i>Acmispon glaber</i> var. <i>glaber</i> [<i>Lotus scoparius</i> var. <i>scoparius</i>]	coastal deerweed
<i>Acmispon strigosus</i> [<i>Lotus</i> s.]	strigose lotus
<i>Melilotus indica</i> *	sourclover
GERANIACEAE – GERANIUM FAMILY	
<i>Erodium botrys</i> *	long-beaked filaree
<i>Erodium cicutarium</i> *	red-stemmed filaree
LAMIACEAE – MINT FAMILY	
<i>Salvia mellifera</i>	black sage
MYRTACEAE – MYRTLE FAMILY	
<i>Eucalyptus</i> sp.*	gum
NYCTAGINACEAE – FOUR-O'CLOCK FAMILY	
<i>Mirabilis laevis</i> var. <i>crassifolia</i> [<i>M. californica</i>]	wishbone bush, California wishbone bush
ONAGRACEAE – EVENING-PRIMROSE FAMILY	
<i>Camissoniopsis bistorta</i> [<i>Camissonia</i> b.]	California sun cup
<i>Camissoniopsis micrantha</i> [<i>Camissonia</i> m.]	small primrose

Species	
EUDICOTS	
<i>Eulobus californicus</i> [<i>Camissonia californica</i>]	mustard-like evening primrose
<i>POLEMONIACEAE</i> – PHLOX FAMILY	
<i>Gilia</i> sp.	gilia
<i>POLYGONACEAE</i> – BUCKWHEAT FAMILY	
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>SALICACEAE</i> – WILLOW FAMILY	
<i>Salix laevigata</i>	red willow
<i>SOLANACEAE</i> – NIGHTSHADE FAMILY	
<i>Datura wrightii</i>	jimson weed
<i>Nicotiana glauca</i> *	tree tobacco
<i>TAMARICACEAE</i> – TAMARISK FAMILY	
<i>Tamarix ramosissima</i> *	saltcedar
MONOCOTYLEDONES – MONOCOTS	
<i>AGAVACEAE</i> – CENTURY PLANT FAMILY	
<i>Hesperoyucca whipplei</i> [<i>Yucca w.</i>]	chaparral yucca
<i>ARECACEAE</i> – PALM FAMILY	
<i>Washingtonia</i> sp.	fan palm
<i>POACEAE</i> – GRASS FAMILY	
<i>Avena barbata</i> *	slender wild oat
<i>Bromus diandrus</i> *	ripgut grass
<i>Bromus madritensis</i> ssp. <i>rubens</i> *	red brome
<i>Bromus tectorum</i> *	cheat grass
<i>Cynodon dactylon</i> *	bermuda grass
<i>Elymus condensatus</i> [<i>Leymus c.</i>]	giant wild rye
<i>Hordeum vulgare</i> *	cultivated barley
<i>Schismus barbatus</i> *	Mediterranean schismus
<i>THEMIDACEAE</i> – BRODIAEA FAMILY	
<i>Dichelostemma capitatum</i>	blue dicks
* non-native to the region it was found	

REACH 101 WILDLIFE COMPENDIA

Species		Number Sighted
LEPIDOSAURIA – LIZARDS AND SNAKES		
<i>PHRYNOSOMATIDAE</i> – ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS		
<i>Sceloporus occidentalis</i>	western fence lizard	1
<i>Uta stansburiana</i>	side-blotched lizard	1
BIRDS		
AVES – BIRDS		
<i>AEGITHALIDAE</i> – BUSHTITS		
<i>Psaltriparus minimus</i>	bushtit	2
<i>TROGLODYTIDAE</i> – WRENS		
<i>Thryomanes bewickii</i>	Bewick's wren	1
<i>EMBERIZIDAE</i> – SPARROWS AND JUNCOS		
<i>Melospiza [Pipilo] crissalis</i>	California towhee	2
<i>CARDINALIDAE</i> – CARDINALS AND ALLIES		
<i>Piranga ludoviciana</i>	western tanager	1
<i>FRINGILLIDAE</i> – FINCHES		
<i>Haemorhous [Carpodacus] mexicanus</i>	house finch	2
<i>Spinus [Carduelis] psaltria</i>	lesser goldfinch	1
MAMMALS		
MAMMALIA – MAMMALS		
<i>LEPORIDAE</i> – HARES AND RABBITS		
<i>Sylvilagus audubonii</i>	desert cottontail	1